

Summer 2012

# Flood Preparedness and Mitigation Guide

Schultz Flood Hotline: (928) 679-8390 Schultz Flood Email: [schultzmitigation@coconino.az.gov](mailto:schultzmitigation@coconino.az.gov)  
Schultz Flood Webpage: [www.coconino.az.gov/schultzfloodinformation.aspx](http://www.coconino.az.gov/schultzfloodinformation.aspx)



## Dear Schultz Flood Area Property Owner,

Thank you for your interest in the 2012 *Flood Preparedness & Mitigation Guide*. This year's *Guide* offers both some flood preparation guidelines and key highlights of long-term flood mitigation measures. Many of the flood preparation tips in this *Guide* are derived from lessons learned during the past two summers. Our hope is that these tips will help to keep you and your family safe during the 2012 monsoon season. We encourage you to read through this *Guide* carefully and plan accordingly for this summer's flooding events. Additional information is also available on the Schultz Flood Webpage.

Since last summer, we have also made great strides towards developing long-term mitigation for the Schultz Fire/Flood area. Approximately \$4.5 million in flood mitigation funding has been secured through the Natural Resources Conservation Service's (NRCS) Emergency Watershed Protection Program (EWP). This funding is being utilized to reduce sediment coming from the forest, and to support the design, engineering and construction of natural channels and flood walls through the neighborhoods.

A variety of other projects are also underway or planned, including renovation of the Girls Ranch Road Berm, repairs to the Lower Campbell Ditch, and maintenance of the Twin Berms located near the landfill. By the fall, the County also expects to secure funding from the Federal Emergency Management Agency (FEMA) for several projects along Campbell Avenue. This *Guide* offers a detailed update on these and other activities, including a preliminary map that shows where mitigation measures are being proposed.

Please know that Coconino County continues to stand with you and is working hard on your behalf. We thank you for your continuing cooperation and hope you find the information in this *Guide* valuable and supportive as you move forward in preparing for the monsoon season.

Sincerely,

Liz Archuleta  
District 2 Supervisor

Mandy Metzger  
District 4 Supervisor



**THE RISK IS REAL.**  
**PURCHASE or RENEW YOUR FLOOD INSURANCE NOW**

Everyone should have flood insurance in the area irrespective of flood risk. Maps and models are not perfect. This includes areas in and near Doney Park. Flood insurance is a simple, low cost way to protect your investments.

### How do I purchase flood insurance?

A separate flood insurance policy through the National Flood Insurance Program (NFIP) covers damage to your home and belongings caused by flooding. Flood insurance costs on average \$350 per year. If your insurance agent is not aware of the procedures for selling flood insurance policies, then please call 1-800-720-1093 for a referral. You can also find a local insurance agent at [www.floodsmart.gov](http://www.floodsmart.gov). When purchasing a flood insurance policy, **there is a 30-day waiting period for coverage to become effective.**

### Why should I purchase a flood insurance policy since the Federal Emergency Management Agency (FEMA) makes disaster assistance available after a flood?

As we experienced, an area only qualifies for Individual Assistance if a high number of homes are destroyed during a disaster. Although declared a federal disaster by the President, the Schultz flooding did not qualify for Individual Assistance and thus no federal assistance was provided to individual homeowners. Federal flood insurance claims are paid even if the President does not declare a disaster.

### Is it necessary to renew my flood insurance policy?

**YES!** It is necessary to renew your flood insurance policy **annually**. If your policy lapses, then you will have to re-start the 30 day waiting period once your policy is reinstated.

**For more information call the National Flood Insurance Program at 1-800-720-1093 or visit [www.floodsmart.gov](http://www.floodsmart.gov)**



# Emergency Watershed Protection (EWP) Program – Projects on Target to Start This Fall

Coconino County has been successful in securing funding towards long-term mitigation of risks to life, property and public infrastructure throughout the flood area. With the support and participation of residents, agency partners and stakeholders, construction is expected to begin this fall for watershed restoration measures in the forest as well as flood mitigation measures through the neighborhoods.

The EWP program supports construction of natural channels through the neighborhoods and sediment reduction measures on the forest. The forest measures are intended to accelerate the stabilization of the on-forest channels, thus reducing the level of the sediment produced before it enters the neighborhoods.

Integration of flood mitigation measures on the forest and in corresponding neighborhoods is a critical component of long-term mitigation. If only neighborhood measures were constructed, then they would be overwhelmed by sediment. The measures on the Forest need a safe and effective route through the neighborhoods to complete the integrated system. In addition to greatly reducing the amount of sediment that is currently carried downstream into the neighborhoods, these measures are intended to “emulate and accelerate” the forest’s natural healing process on the mountain.

- EWP projects will:
- Improve safety and property values
  - Require drainage easements for the County to construct the measures on private property
  - Allow for safer and more stable flows through neighborhoods for the more typical floods
  - Occur on forest land as well as through the neighborhoods

The County conducted 11 corridor meetings for property owners that may be directly affected by the natural channels or other flood mitigation measures. These invitational meetings provided an opportunity for these property owners to learn about the preliminary plans for their corridor and to provide feedback to the County and NRCS.

A map depicting the preliminary EWP corridor alignments is shown on page 3. All the information shared at the corridor meetings can be found on the Schultz Flood webpage at <http://www.coconino.az.gov/schultzfloodinformation.aspx> under “Corridor Meetings.” If you have comments you would like to share, then please email the County at [schultzmitigation@coconino.az.gov](mailto:schultzmitigation@coconino.az.gov) or call the Flood Hotline at 928-679-8390.

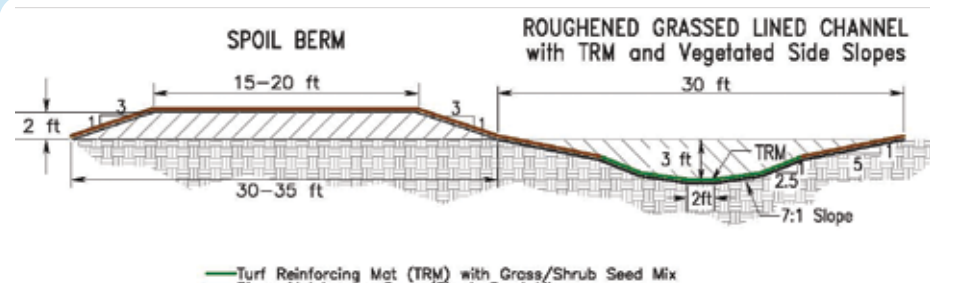
## Final Engineering Underway – EWP Time Limitations

As of the time of publication, three corridors - Brandis/Thames, Copeland and Rope Arabian - have moved into more a more detailed phase of engineering. The County continues to work with property owners in the other corridors to answer questions and to determine the level of interest in pursuing flood mitigation. Given the time limitations associated with the EWP program, the County strongly encourages everyone to seriously evaluate their options and provide that input to the County as soon as possible. Based upon the current federal funding environment, the County does not expect to receive additional funding for flood mitigation so the EWP funding may well be the only opportunity for improving the flood mitigation in the area, particularly on private property.

Once the final engineering is fully underway, the County will be setting up meetings once again with the residents within

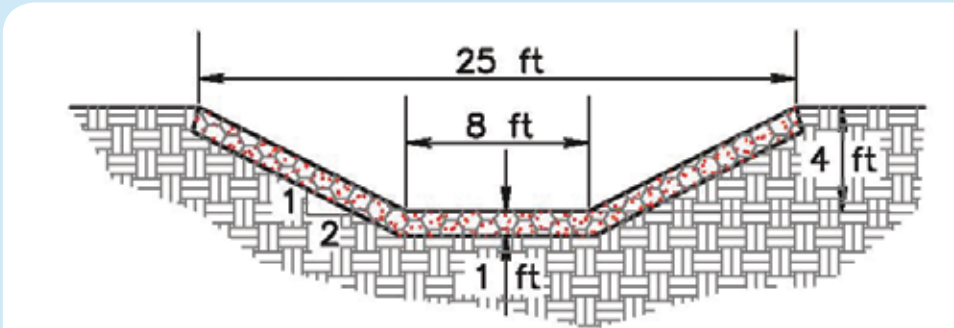
those corridors to share the near final plans. If the near final plans remain acceptable to the property owners, then the County will begin securing drainage easements. The timing of the meetings is hard to judge but will likely be targeted for late July or early August.

This tight timeline reflects the County’s desire to construct some level of EWP measures this fall and means that the property owners, the County, Forest Service and NRCS must work very effectively together.



Preliminary Natural Channel Design

Natural Channel Design



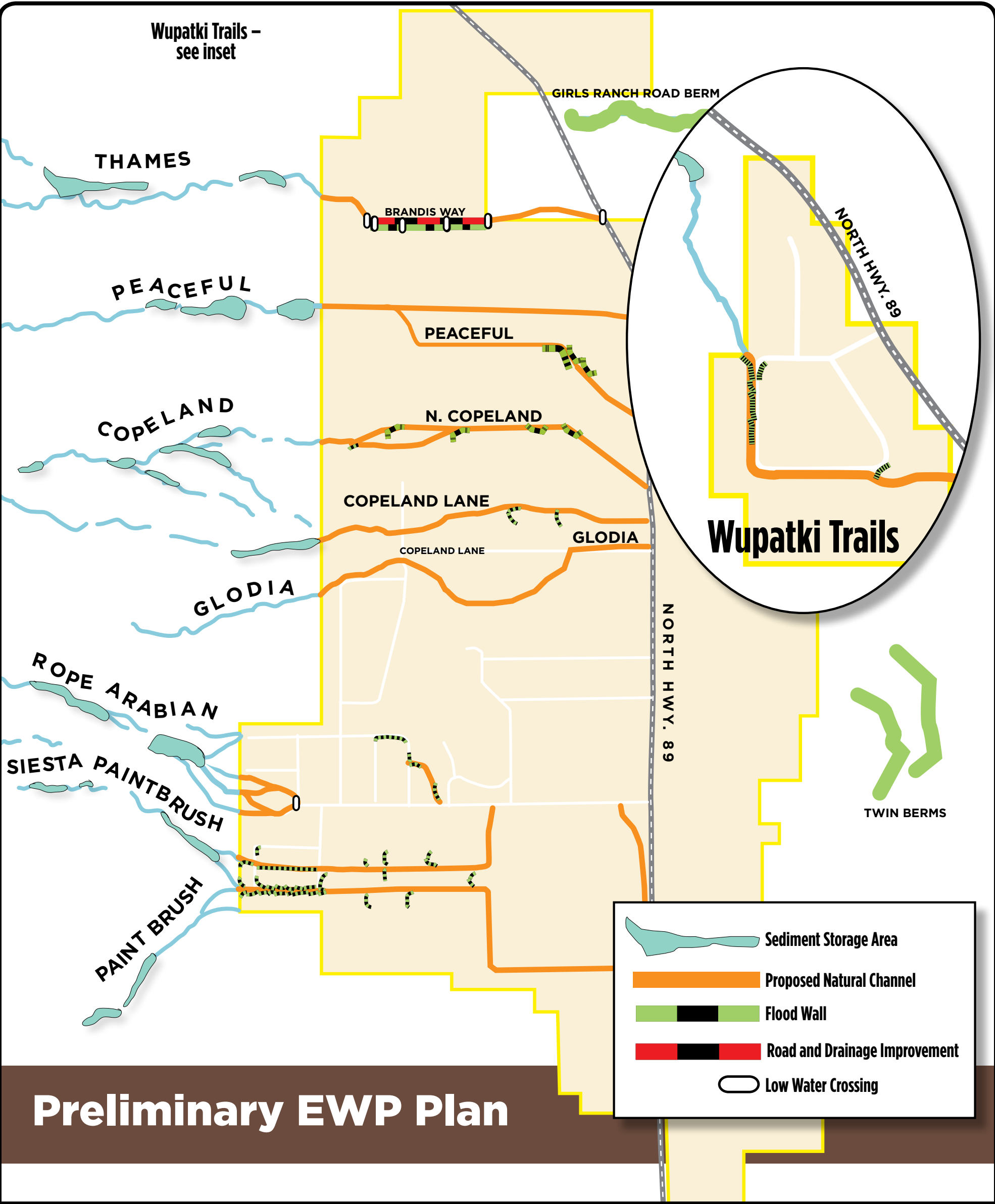
Preliminary Gabion-Lined Channel Design

Natural Channel Design



Example of a Natural Channel



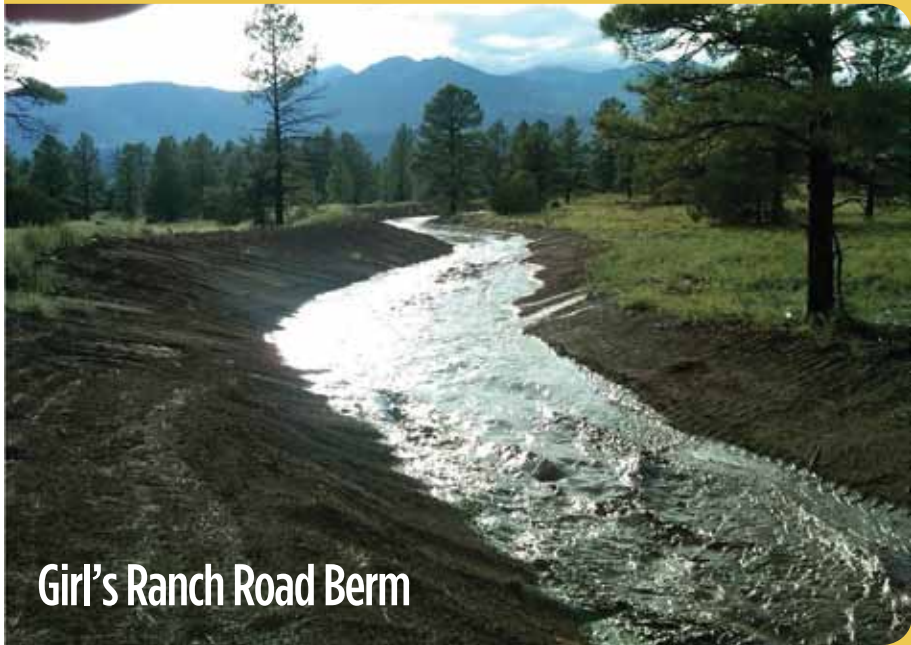




# Other Flood Mitigation Projects Planned for Summer 2012



Lower Campbell Repair Project



Girl's Ranch Road Berm



Rehabilitation of the "Twins"

## Lower Campbell Avenue Repair Project

Coconino County has begun extensive construction to repair the Lower Campbell Ditch, which was damaged last summer during the major flooding that occurred on September 13th. The County contracted with Tiffany Construction, a northern Arizona-based firm with experience constructing gabion-lined ditches, to complete the project. Gabion baskets, which were initially installed last year, are wired baskets filled with stones that are used to line ditches.

On Sept. 13, monsoonal rainfall hit the 15,000-acre Schultz burn area and sections of the gabions lining the walls of the Lower Campbell Ditch failed where the ditch floor was not lined by concrete. At the time, the U.S. Army Corps of Engineers refused to allow the County to line the entire ditch floor with concrete. However, after several meetings, the County received approval to repair the damaged ditch, including the installation of the concrete floor. The County contracted with Kimley-Horn & Associates, an engineering firm with extensive experience designing gabion-lined channels, to assess the damage and to engineer the repair project. KHA also confirmed that the original design, which included the concrete floor, was the appropriate design for the ditch.

Crews began work on the repair project April 2 and construction is expected to last until June 30, barring any weather delays. Upon completion of the project, the ditch will be re-vegetated, and a fence and signage installed to inform residents to keep out of the ditch.

Daily construction zones will be set up throughout the duration of this project. Although the goal will be to maintain access to and from the neighborhoods with minimal delays, residents and motorists are advised to drive with caution as trucks, construction equipment and materials will present along Campbell Avenue for the duration of the project.

The project is funded by multiple sources, including the County's Flood Control District, the Arizona Department of Emergency Management and the Federal Emergency Management Agency.

## Reconstruction of the Girl's Ranch Road Berm

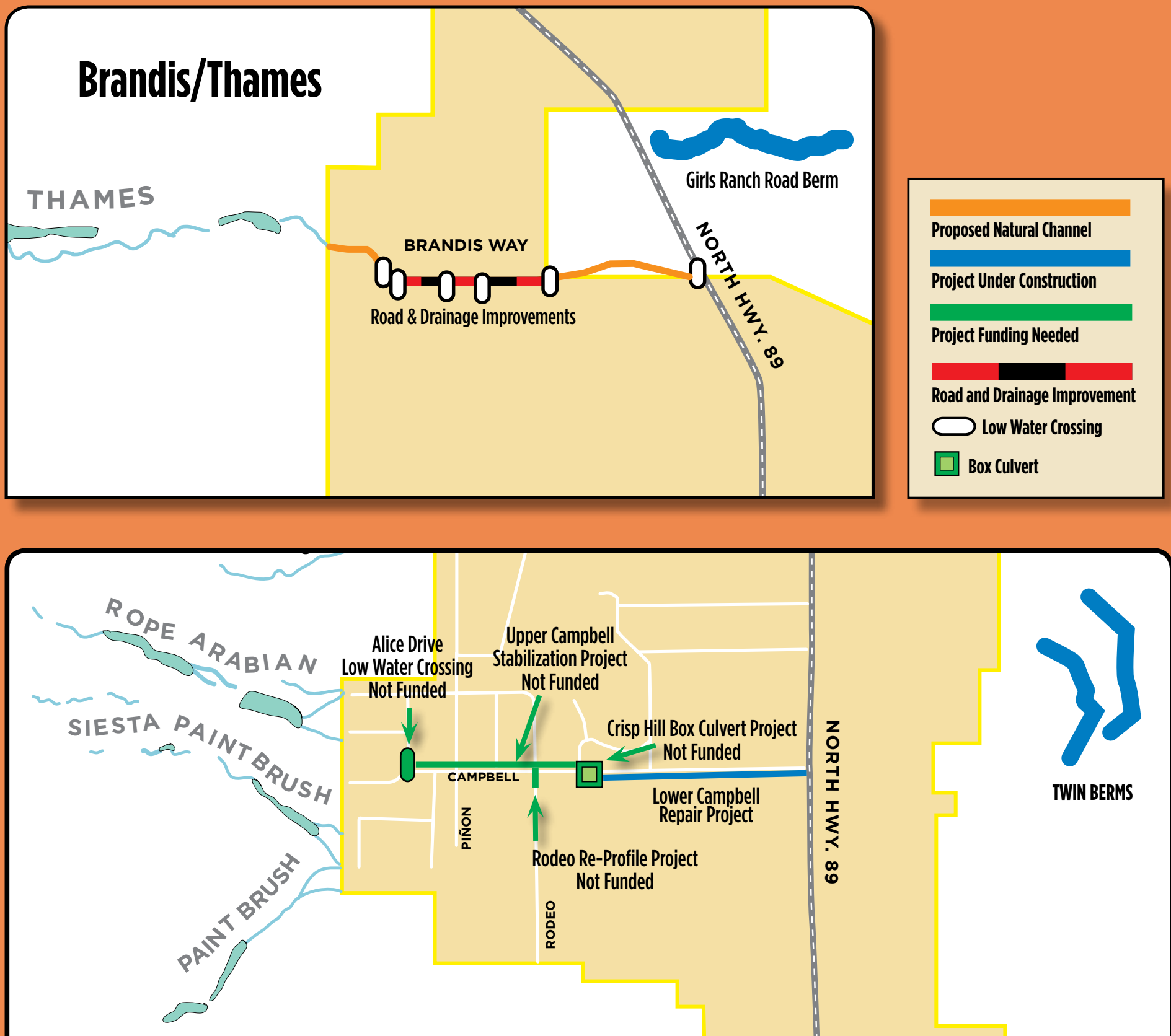
The Girl's Ranch Road Berm Stabilization project consists of reconstruction of an approximately 2,400-foot long earthen berm running west to east to the north of Forest Service Road 776 near State Highway 89. The existing berm was constructed during the emergency response to the Schultz Flood in 2010 to protect homes downstream in Fernwood and Doney Park.

The Girl's Ranch Road Berm will be reconstructed with U.S. Forest Service funding. The project is currently under construction, and is anticipated to be complete within six weeks. This berm is being reconstructed to provide additional flood mitigation for the neighborhoods east of Hwy. 89, including Fernwood and Doney Park.

## Rehabilitation of the "Twins"

Last summer the County constructed two major berms just east of the eastern end of Campbell Avenue (east of Hwy. 89) that are affectionately called the "Twins." The Twins provide significant protection to Doney Park residences. The Twins just underwent a rehab process to prepare them for summer flood flows. The construction of the Twins and their upkeep is being funded by the U.S. Forest Service.

# Other Flood Mitigation Projects



## Federal Emergency Management Agency (FEMA)

In 2011, the County submitted grant proposals for flood mitigation projects to FEMA. Three projects are moving through the funding process and the County expects approval this summer or early fall. Those projects include:

- Upper Campbell Stabilization Project — a project to line the ditch on Upper Campbell Avenue
- Alice/Campbell Low Water Crossing — allow for the passage of water without destroying the road and utilities at this intersection
- Re-Profile of Rodeo Drive — re-profile Rodeo Drive so the water is more likely to stay on Campbell Avenue and not flow into homes south of Campbell at Rodeo

These three projects are critical for retaining access to the area given Campbell Avenue is the major County transportation corridor for the area. In addition, the projects provide protection to the roadway, adjoining private properties, and utilities. Furthermore, the County spends significant funds each summer maintaining and attempting to protect this area. Construction timing is dependent upon FEMA funding, which is expected this summer or early fall.



## Drainage Easements: Frequently Asked Questions

### What is a drainage easement?

An easement is a right for one entity to use a part of another's property for a specific purpose, without an exchange of ownership. In the Schultz Flood area, a drainage easement provides the County with the right to access a specific area of an owner's private property in order to construct and maintain a natural channel and other forms of flood mitigation. The owner will retain ownership of the property – the County is just granted access for the purpose for drainage only.

### Will financial compensation be offered in exchange for drainage easements?

The County does not have the financial resources to financially compensate residents for flood easements. However, there may be other ways that property owners can obtain alternative means of "compensation," such as property tax and income tax benefits. The County is evaluating our legal ability to provide a temporary reduction in property taxes and will be providing further information. For more information on potential income tax reductions, please review our "Drainage Easement Process" document on the Schultz Flood website's "Corridor Meetings" page at <http://www.coconino.az.gov/schultzfloodinformation.aspx?id=27363>, which also has information regarding the Uniform Act. You can also contact Steve Salazar at the Coconino County Public Works Department, Right of Way Office at 928-679-8340 or via email to: [ssalazar@coconino.az.gov](mailto:ssalazar@coconino.az.gov). Most importantly, please consult with your tax advisor as to how these potential tax deductions may apply in your situation.

### How Might Your Property Be Affected by a Drainage Easement?

The exact size and location of easements will be determined during final engineering of the flood mitigation channels and measures. A drainage easement will not allow public access to your property, and will most likely not affect the zoning of your property. A drainage easement will limit some uses of your property, such as construction of buildings or more permanent fixtures that may impact water flow. In addition, the drainage easement will temporarily limit how you are able to use that specific portion of your property until vegetation recovers on the new natural channel or other flood mitigation measure.

## How Can I Prepare for Flooding This Summer?

### Weather Terminology — Understanding Watches, Warnings, and Advisories

#### Summer in the Southwest – Information from the National Weather Service

Armed with Doppler radars, powerful supercomputers, advanced weather satellites, automated weather and rain gauges, and an advanced lightning detection network, forecasters at the National Weather Service (NWS) provide highly accurate severe weather warnings. Advanced NWS computer systems now allow warnings to be generated in seconds for highly detailed areas. Those warnings are then transmitted to the public, the media and emergency management officials via NOAA Weather Radio, the Emergency Alert System, and the Internet.

The National Weather Service has created a webpage dedicated to the Schultz Flood area. The Schultz Flood area webpage is highlighted on the Flagstaff National Weather Service's main website at <http://www.wrh.noaa.gov/fgz/DSS/schultzalerts.php?wfo=fgz>

**FLOOD/FLASH FLOOD WATCH** is issued when the expectation of a flood event has increased, but its occurrence, location, and/or timing is still uncertain. Usually are issued within 48 hours of the forecast flood event.

**FLASH FLOOD WARNING** is issued when flash flooding is occurring or is imminent. Individuals in the warned area should take immediate precautions to protect life and property.

**SMALL STREAM FLOOD ADVISORY** is issued for elevated river/stream flows, ponding of water in urban or other areas, and for flooding that is generally only an inconvenience (not life threatening) to those living in the affected area.

#### Sandbags

A properly built sandbag wall can prevent or reduce flood damage. The County is providing pre-filled, UV protected sandbags during the months of May and June to support residents in preparing for possible flooding. The pre-filled bags will be available at the Silver Saddle Trading Post located at 9001 N. Highway 89. Please be reasonable as to the number of bags you take for use. Residents will need to load their own bags. Please do not leave old sand bags at the site. After June 30, the site will have piles of sand and loose sand bags for use by residents. Properly filling and constructing a sand bag wall is important. Please visit [www.coconino.az.gov/schultzfloodinformation.aspx](http://www.coconino.az.gov/schultzfloodinformation.aspx) for detailed instructions and to view a video.

## Prepare your Septic System for a Flood

Prior to summer monsoon season there are certain measures homeowners can take to protect their septic systems before floodwaters arrive.

- **Make sure all septic tanks are full.** High-water season is not the time to have tanks pumped because empty tanks are buoyant and may float out of the ground when water tables are high.
- **Plug floor drains to keep sewage from backing up into house.** Of course, floodwaters may still enter through cracks and seams.
- **Seal all the septic system's possible points of entry.** If possible, seal the manhole and inspection ports to keep excess water out of the tank.
- **Waterproof all electrical connections** to avoid electrical shock, or damage to wiring, pumps, and the electrical system.
- **Replace cracked, damaged, or missing septic system caps.**

Most septic tanks are not damaged by flooding since they are below ground and completely covered. However, septic tanks and pump chambers can fill with silt and debris, and must be professionally cleaned. Whenever your septic system is threatened by flooding there is a risk that sewage will back up into your home. The only way to prevent this backup is to relieve pressure on the system by using it less. If you have questions, then please call the Flood Hotline.

## Additional Home Protection Measures to Consider by Flood Risk

In addition to flood insurance and the measures noted above, you may want to consider additional measures to protect your home suggested by the Army Corp of Engineers and FEMA.

#### Properties Identified at High Risk Could Consider:

- Flood Walls • Flood Wrap • Structural Flood Proofing of Exterior Walls • Low Water Crossings for Driveways • Flood Doors and Windows • Raise Home

More information about flood barrier and material specifications can be found at [www.coconino.az.gov/schultzfloodinformation.aspx](http://www.coconino.az.gov/schultzfloodinformation.aspx)



## Road Maintenance During Flooding Events

### County Maintained Roads

Motor graders will be utilized to remove debris from County maintained roadways. The typical process for clearing roads after flooding events is:

- One motor grader will remove debris from Campbell Avenue and all roads south of Campbell. Once these roads are secured, the grader will then clear the roads north of Campbell affected by flood waters.
- A second motor grader will remove debris from Copeland Avenue, then proceed to the roads north of Copeland, next the roads south of Copeland, and then meeting up with the Campbell motor grader to complete those roads north of Campbell.
- A third motor grader will focus on the Wupatki Trails subdivision and Brandis Road area.
- Additional equipment will be mobilized when conditions dictate for the Timberline, Fernwood, and Doney Park areas.
- Routes are subject to change depending upon flood events and resources available.

### Private Roads

Private roads are not maintained by the County. However, after an emergency flood event, the County will make private roads open and passable. The County will not provide materials, do construction work or ditch maintenance on private roads.

### Drainage Easements & Low Water Crossings

The County will make an effort to clean drainage easements dedicated to the County prior to the monsoon season. The County is unable to commit resources to clean drainage easements dedicated to the “public” or to Homeowners Associations. In some locations, the County intends to replace road culverts with low water crossings if funding is available or emergency conditions warrant.



### Building Permits

A building permit may be required for some of the home protection measures discussed in this Guide and the County strongly encourages you to contact the County Community Development Department at (928) 679-8850 to discuss your plans, particularly if you are planning to build a flood wall, replace or install flood windows/doors and/or raise your home.

### Site Visits

The County is unable to provide site visits to residents regarding flood mitigation measures. If you desire advice, then please contact one of the various local civil engineering firms.

### Legal Considerations

Efforts by property owners or tenants to keep water off of their property could have consequences for their neighbors and result in liability for the person diverting the water. The law in Arizona regarding water diversion is based primarily on court decisions rather than statute. Different rules apply depending on whether the water that is diverted is surface water, flood water, or water that has been previously captured in a stream or water course.

To determine whether or not any water diversion plan will result in liability, all of the facts and circumstances must be considered. For example, if there is a method of diverting water that will have less impact on a neighbor and you choose instead to use a method that has a larger impact on a neighbor's property, then you could be liable. Liability will hinge on the particular water diversion plan, available alternatives, what type of water is diverted, and other factors particular to the situation. Some things to consider include, but are not limited to: Is there another way to divert the water that would result in less or no damage to neighboring property? Does the water diversion plan concentrate water in amount or in velocity? Does the plan move water out of its normal channel? The *Arizona Attorney Magazine* published an article by David L. Abney in 1995 that has a good summary of water diversion law in Arizona. This article is available in the County's Law Library and can be found at [www.coconino.az.gov/schultzfloodinformation.aspx](http://www.coconino.az.gov/schultzfloodinformation.aspx).

The County recommends that you consult with a private technical expert, such as a licensed engineer or hydrologist, to determine what plan would best protect your property while minimizing affects on your neighbors. The County is prohibited from giving legal advice to individuals and we caution you that the law in this area is particularly complicated. The County recommends that you consult a private attorney to get a full understanding of your potential liability before undertaking water diversion projects that affect neighboring property. You will also want to consult with your insurance carrier to understand whether or not the policy you have will cover you for this type of liability.

### How Can I Resolve a Dispute with My Neighbor?

First, we encourage you to talk with your neighbor if you have concerns and attempt to resolve them. If the issue is not resolved easily, then you can consider using the Coconino County Superior Court's alternative dispute resolution (ADR) service through which you can participate in mediation. This service is initially being offered at no cost to flood victims. If you have questions, then please call the Coordinator, Sidney Buckman, at (928) 679-7508 or email him at [sbuckman@courts.az.gov](mailto:sbuckman@courts.az.gov).





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## Resources

**Schultz Flood Hotline**.....(928) 679-8390 or (877) 679-8390  
**Schultz Flood Email**.....schultzmitigation@coconino.az.gov  
**Schultz Flood Webpage**.....www.coconino.az.gov/schultzfloodinformation.aspx

**National Weather Service – Schultz Flood Web page**  
<http://www.wrh.noaa.gov/fgz/DSS/schultzalerts.php?wfo=fgz>

United States Forest Service Peaks Ranger District.....(928) 526-0866  
Summit Fire.....**Dial 911 in an Emergency**  
    (Hwy 89).....(928) 526-1724  
    (Koch Field Road/Main Office).....(928) 526-9537  
Coconino County Humane Society.....(928) 526-1076  
Second Chance Center for Animals.....(928) 526-5964  
Cinder Lake Landfill.....(928) 527-1927  
American Red Cross.....(928) 779-5494  
UniSource Energy Services.....(928) 525-8103  
Arizona Public Service (APS).....(800) 253-9405  
CenturyLink.....(800) 573-1311  
Doney Park Water.....(928) 526-1080

For further information and additional resources in more detail:

[www.readycoconino.az.gov](http://www.readycoconino.az.gov) • [www.ready.gov](http://www.ready.gov) • [www.floodsmart.gov](http://www.floodsmart.gov) • [www.fema.gov](http://www.fema.gov)



**United Way of Northern Arizona** continues to coordinate efforts to provide flood area residents with assistance in preparing for the upcoming monsoon season. United Way is sponsoring several volunteer days to help residents make, place and replace sand bags and to clear the front of jersey barriers in the Schultz Flood area. We would like to thank United Way of Northern Arizona for organizing these important volunteer events and providing an opportunity for the broader community to assist their neighbors in the Schultz Flood area.



## COMMUNITY RESOURCES

### How Can I Help?

#### Donate

Donate to the Schultz Flood Fund established by United Way of Northern Arizona. The purpose of the fund is to help people impacted by the flood meet their basic needs and regain safety and stability. Specifically, the priority use is for individuals and families living in the communities impacted by the Schultz Flood who face economic hardship and who have sustained damage to their homes and property as a result of the flood. The fund is managed by the United Way of Northern Arizona. All funds are distributed to organizations that provide assistance to residents. To donate call the Schultz Flood Hotline (928) 679-8390 or visit [www.nazunitedway.org](http://www.nazunitedway.org) and select *Donate Now*, select payment option and choose “Schultz Flood Fund” from the drop-down menu.

#### Volunteer

Over the past two years, over 1,100 people volunteered to support residents in the flood area. Once again United Way of Northern Arizona is mobilizing volunteers to assist with flood preparation efforts during May and June and flood response efforts during the monsoon season. Please encourage your family, friends and neighbors to volunteer. Call the Flood Hotline to sign up today.

#### Join the Community Emergency Response Team (CERT)

The goal of CERT is to have citizens participate in making their communities better prepared for dealing with different types of disasters. People who go through CERT training have a better understanding of the potential threats to their home, workplace and community and can take the right steps to lessen the effects of these hazards. If interested, then please call (928) 226-5089.

#### Neighborhood Watch Meetings

Another way to stay informed about Schultz Flood related activities is to attend the Neighborhood Watch meetings in your area. The Doney Park Neighborhood Watch meeting takes place the first Thursday of every month at Cromer School at 6 p.m. The Timberline-Fernwood Neighborhood Watch meeting is the first Tuesday of each month at Summit Fire Station #33 on Hwy. 89 at 6:30 p.m.

#### Black Bill Park Neighborhood Association (BBPNA)

BBPNA was founded by a group of residents in the Schultz Flood area to serve Timberline, Fernwood, Hutchison Acres and the Wupatki Trails areas. The fire and floods of 2010 profoundly affected lives, homes, property values and the landscape. To learn more about BBPNA’s activities, meetings and recent Community Visioning Retreat and Community Survey Results go to [www.BBPNA.org](http://www.BBPNA.org).